Diabetes

Disease Information Packets – Slide Sets

Public Health Services,

Community Health Statistics

8/2010

What is Diabetes?

Diabetes Mellitus, or Diabetes, is a disorder of carbohydrate metabolism that results in high blood glucose (sugar).

- Diabetes ranked as the 7th leading cause of death for all ages in 2008.

- As of 2008, more than 24 million people in the United States have diabetes.
  - Nearly 6 million of them are undiagnosed.

Top 10 Leading Causes of Death in the United States, 2008

1. Heart Disease
2. Cancer
3. Stroke
4. Respiratory Diseases
5. Accidents (Unintentional Injuries)
6. Alzheimer's Disease
7. **Diabetes**
8. Influenza and Pneumonia
9. Nephritis & Nephrosis
10. Septicemia

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Types of Diabetes

Insulin is a hormone involved in controlling blood glucose levels.

- Type I: The body does not produce insulin.
  - Diagnosed most often in childhood and requires daily insulin
  - Accounts for 5-10% of all diabetes
  - Autoimmune disorder; is not preventable

- Type II: The body cannot produce enough insulin or does not use its insulin properly.
  - Occurs at all ages, and is often associated with obesity
  - Accounts for 90-95% of all diabetes
  - Is often preventable

- Gestational: First diagnosed during pregnancy
  - 5-10% of women with gestational diabetes remain Type II diabetics
  - Gestational diabetics have 20-50% chance of developing type II in the following 5-10 years

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Demographic Risk Factors

- ## Age
  - Type II diabetes is associated with older age, although it is increasingly diagnosed in children and teens.

- ## Family history
  - Individuals with first degree relatives who are diabetic are at risk for developing diabetes.

- ## Race/Ethnicity
  - Hispanic/Latino Americans, American Indians, and some Asian Americans and Native Hawaiians/Pacific Islanders are at particularly high risk for Type II diabetes.

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Social and Behavioral Risk Factors

- Pre-diabetes:
  - Blood glucose levels are elevated, but not as high as when someone has diabetes
  - Progression can be stopped with diet, exercise and weight management.

- Poor diet and physical inactivity

- Overweight/Obesity

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Intermediate Outcomes

- ## Heart Disease
  - Heart disease death rates for diabetic adults are 2-4 times higher than for non-diabetics.

- ## High Blood Pressure
  - In 2007, two-thirds (67%) of diabetic American adults reported having high blood pressure.

- ## High Cholesterol
  - In 2007, nearly two-thirds (62%) of diabetic American adults reported having high cholesterol.

- ## Stroke
  - Stroke was listed on 1 of every 6 of the death certificates of diabetics aged 65+ in the United States in 2004.

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Intermediate Outcomes

- Eye Disease
  - Diabetes is the leading cause of blindness in Americans aged 20-74 years.

- Gum Disease
  - Diabetics are twice as likely to have gum disease as non-diabetics.

- Kidney disease
  - In 2005, diabetes accounted for nearly half of new end stage renal disease cases in the United States.

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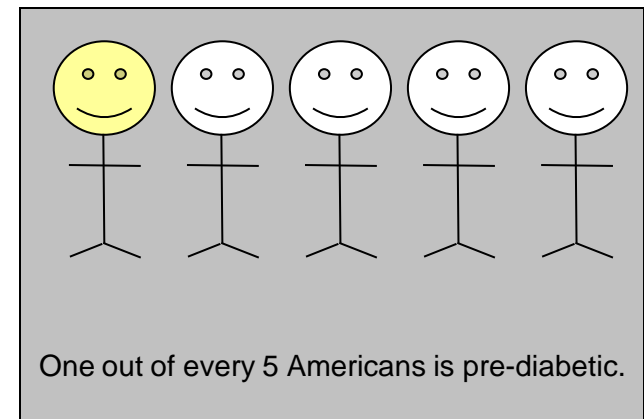
Intermediate Outcomes

- Lower extremity conditions
  - 60-70% of diabetics have some form of neuropathy.
  - More than 60% of non-traumatic lower limb amputations occur among diabetics.

- Infections
  - Diabetics are more prone to infections such as influenza or pneumonia.

- Pregnancy complications
  - Gestational diabetes can cause complications to the infant.

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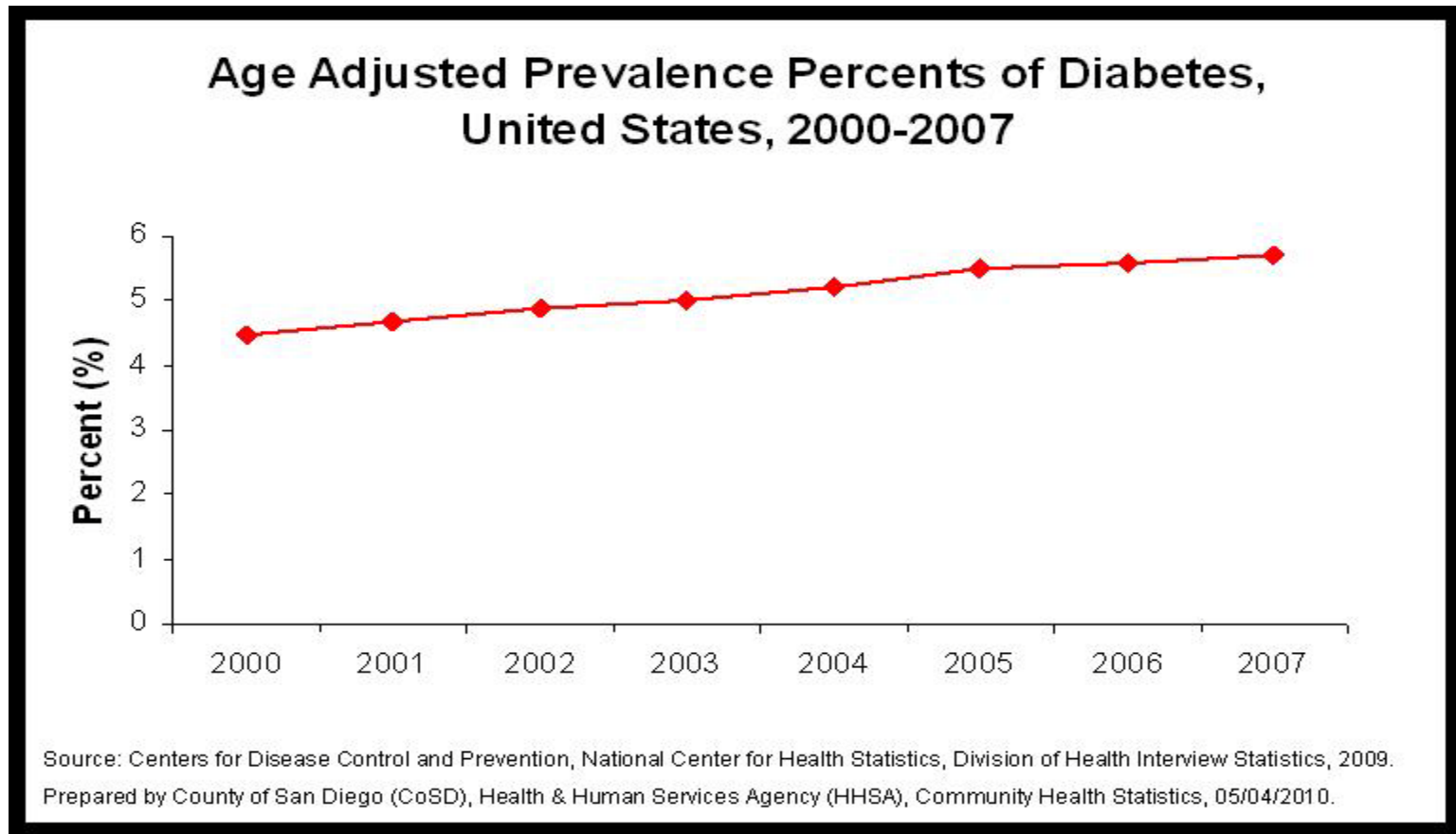**HHSA**
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National Statistics and Disparities

- In 2007, nearly 1 of every 10 Americans aged 20 years and older had diabetes (NIDDKD).

- Blacks and Hispanics have are twice as likely than Whites to have diabetes. (CDC)

- Nearly 1 out of 5 Americans
 is pre-diabetic.

One out of every 5 Americans is pre-diabetic.

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National Statistics

Age Adjusted Prevalence Percents of Diabetes, United States, 2000-2007

Source: Centers for Disease Control and Prevention, National Center for Health Statistics, Division of Health Interview Statistics, 2009.
Prepared by County of San Diego (CoSD), Health & Human Services Agency (HHSA), Community Health Statistics, 05/04/2010.

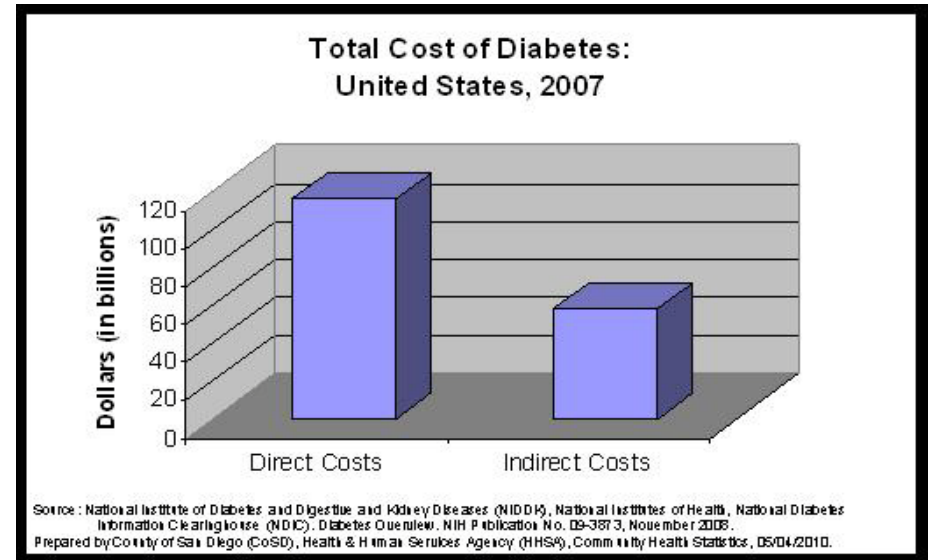The percentage of Americans with diabetes rose from 2000-2007.

National Statistics and Disparities
Diabetes Prevalence by Race/Ethnicity and Sex, United States, 1980–2005
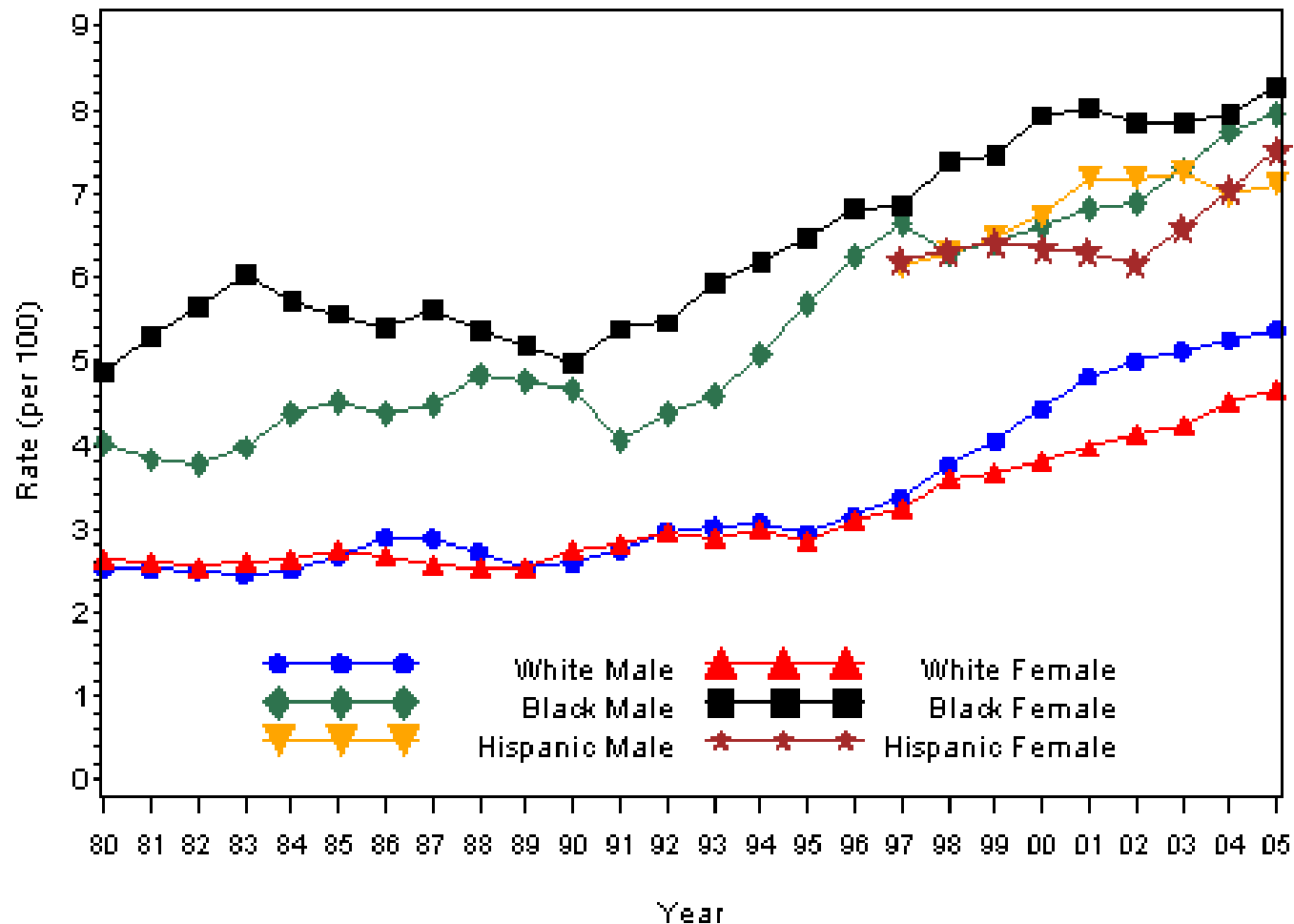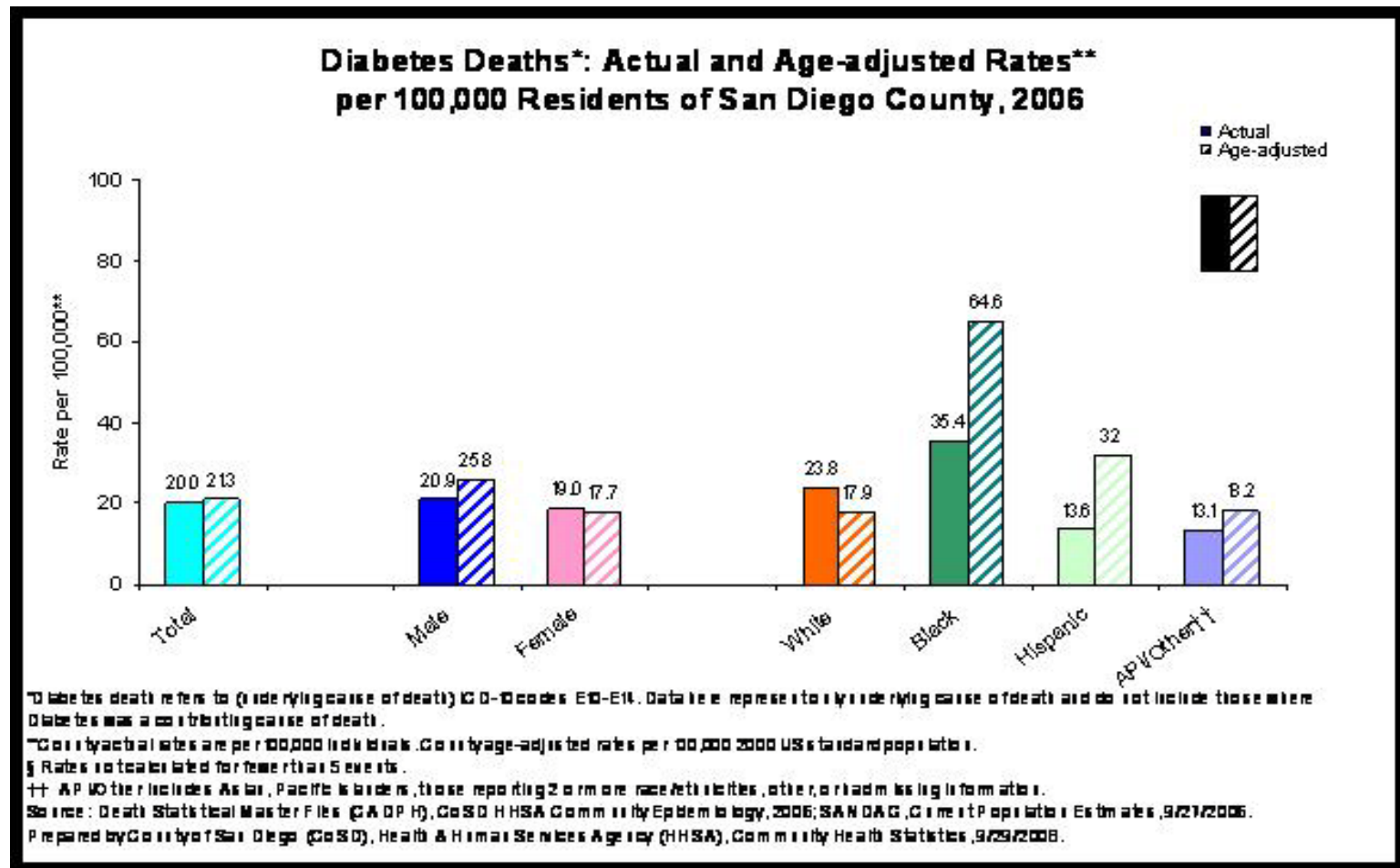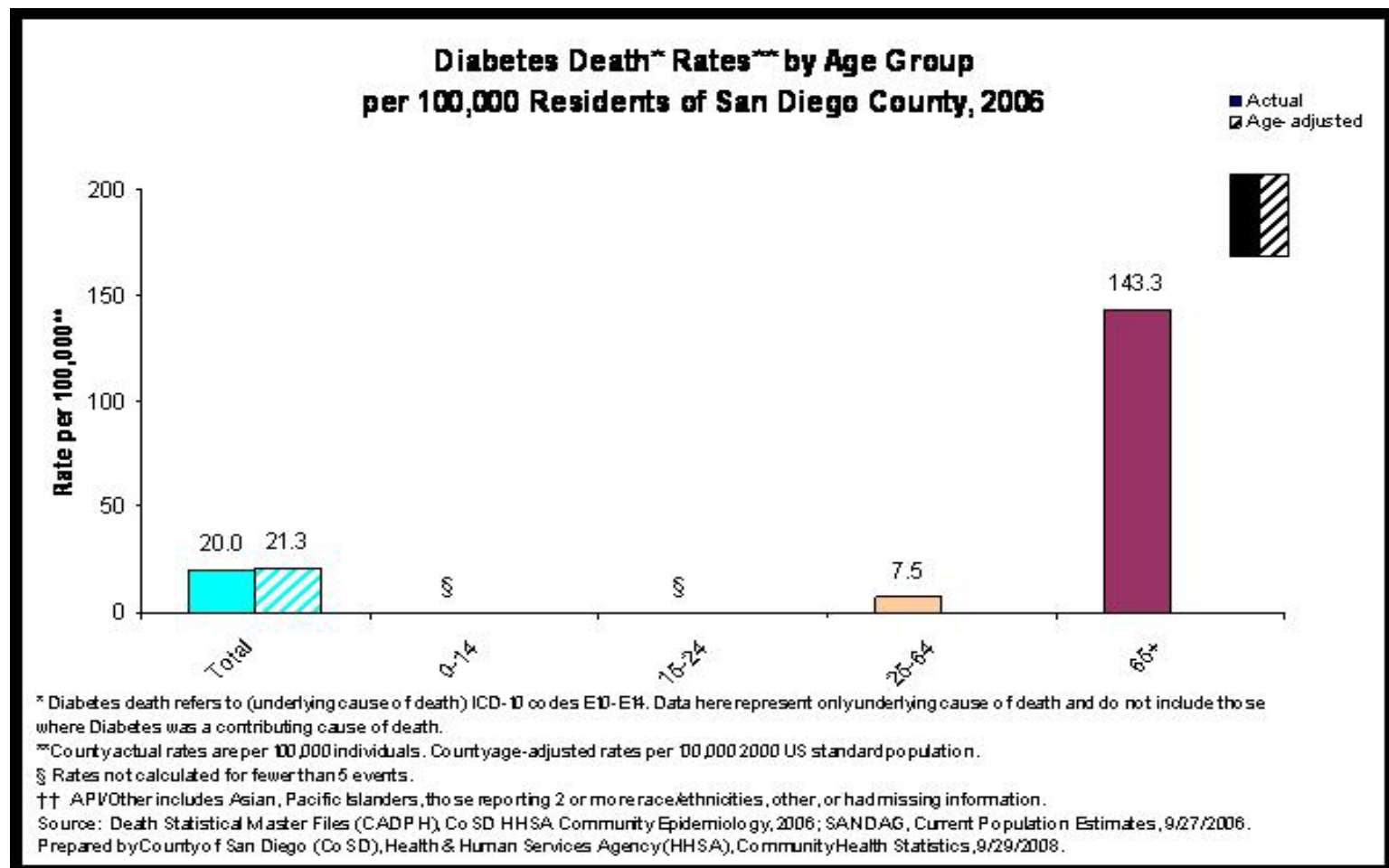
Costs

- In 2007, the United States spent $174 billion on diabetes:
  - $116 billion in direct medical costs.
  - $ 58 billion in indirect costs, such as lost productivity and disability payments.

Total Cost of Diabetes: United States, 2007
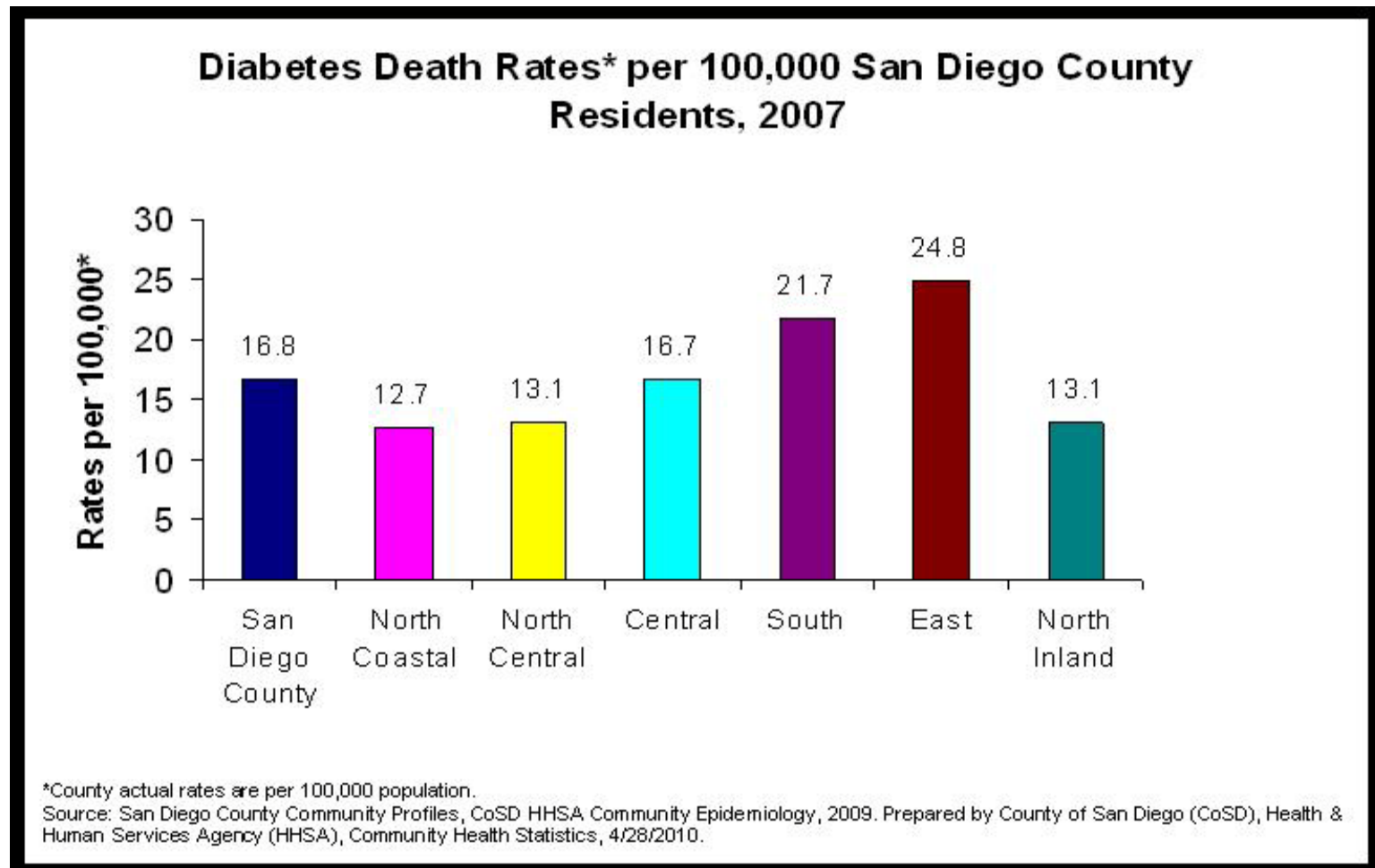
Source: National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), National Institutes of Health, National Diabetes Information Clearinghouse (NDIC). Diabetes Overview. NIH Publication No. 09-3873, November 2008. Prepared by County of San Diego (CoSD), Health & Human Services Agency (HHSA), Community Health Statistics, 05/04/2010.

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Local Statistics and Disparities

Local Statistics and Disparities

Diabetes Death* Rates** by Age Group per 100,000 Residents of San Diego County, 2006

Local Statistics and Disparities

Diabetes Death Rates* per 100,000 San Diego County Residents, 2007

Rates per 100,000*

- San Diego County: 16.8
- North Coastal: 12.7
- North Central: 13.1
- Central: 16.7
- South: 21.7
- East: 24.8
- North Inland: 13.1

*County actual rates are per 100,000 population.
Source: San Diego County Community Profiles, CoSD HHSA Community Epidemiology, 2009. Prepared by County of San Diego (CoSD), Health & Human Services Agency (HHSA), Community Health Statistics, 4/28/2010.

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Local Statistics and Disparities

Diabetes Death Rates* per 100,000 San Diego County Residents, 2000-2007
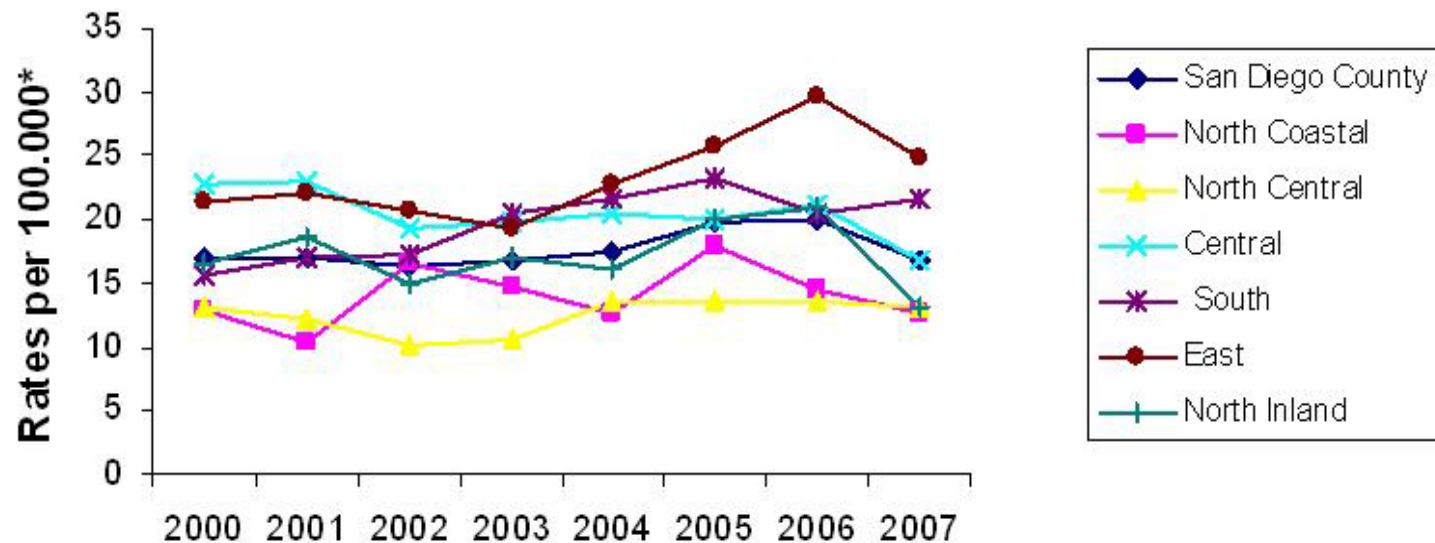
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Source: San Diego County Community Profiles, CoSD HHSA Community Epidemiology, 2009. Prepared by County of San Diego (CoSD), Health & Human Services Agency (HHSA), Community Health Statistics, 4/28/2010.

Prevention

- ## Control Blood Sugar
  - Decreasing glucose levels decreases the risk of complications
  - For every 1% decrease in blood A1C levels (a indicator of blood sugar control) decreases risk for eye, nerve and kidney diseases by 40%.
    - Meal planning
    - Monitor blood glucose levels
    - Medication

- ## Control Blood Pressure
  - Controlling blood pressure can reduce heart disease and stroke risk up to 50%, and reduced risk of neuropathy, kidney and eye disease by up to 33%.
    - Monitor levels
    - Take medications, as recommended
    - Manage stress
    - Diet, exercise

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Prevention

- ## Maintain a healthy weight
  - Loose excess weight
  - Even small weight losses reduce risk
    - For people with pre-diabetes, weight loss and exercise can reduce the onset of diabetes by over 50% over a 3 year period. (CDC)

- ## Do not smoke (ADA)
  - Smoking raises your blood sugar level, making it harder to control your diabetes.
  - Smoking damages the blood vessels which can worsen foot ulcers, lead to blood vessel disease and leg and foot infections.
  - Smokers with diabetes are more likely to develop nerve damage and kidney disease.

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Prevention

- See your doctor regularly to monitor:
  - Blood glucose, cholesterol and lipid levels over time
  - Kidney function

- Take care of your feet
  - Checking your feet daily can help prevent progression to ulcers and amputation.
  - Protect your feet; wear shoes & socks and comfortable, well fitting shoes.
  - Avoid cold, prevent frostbite

- Get regular dental exams
 - Maintain good oral health
  - Brush and floss daily

Prevention

- ## Get yearly eye exam for cataracts, diabetic retinopathy and glaucoma
  - People with proliferative retinopathy can reduce their risk of blindness by 95 percent with timely treatment and appropriate follow-up care. (CDC)

- ## Get annual influenza vaccination
  - Diabetes can affect the immune system, slow healing and lead to flu complications. (ADA)

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Critical Pathway for Diabetes
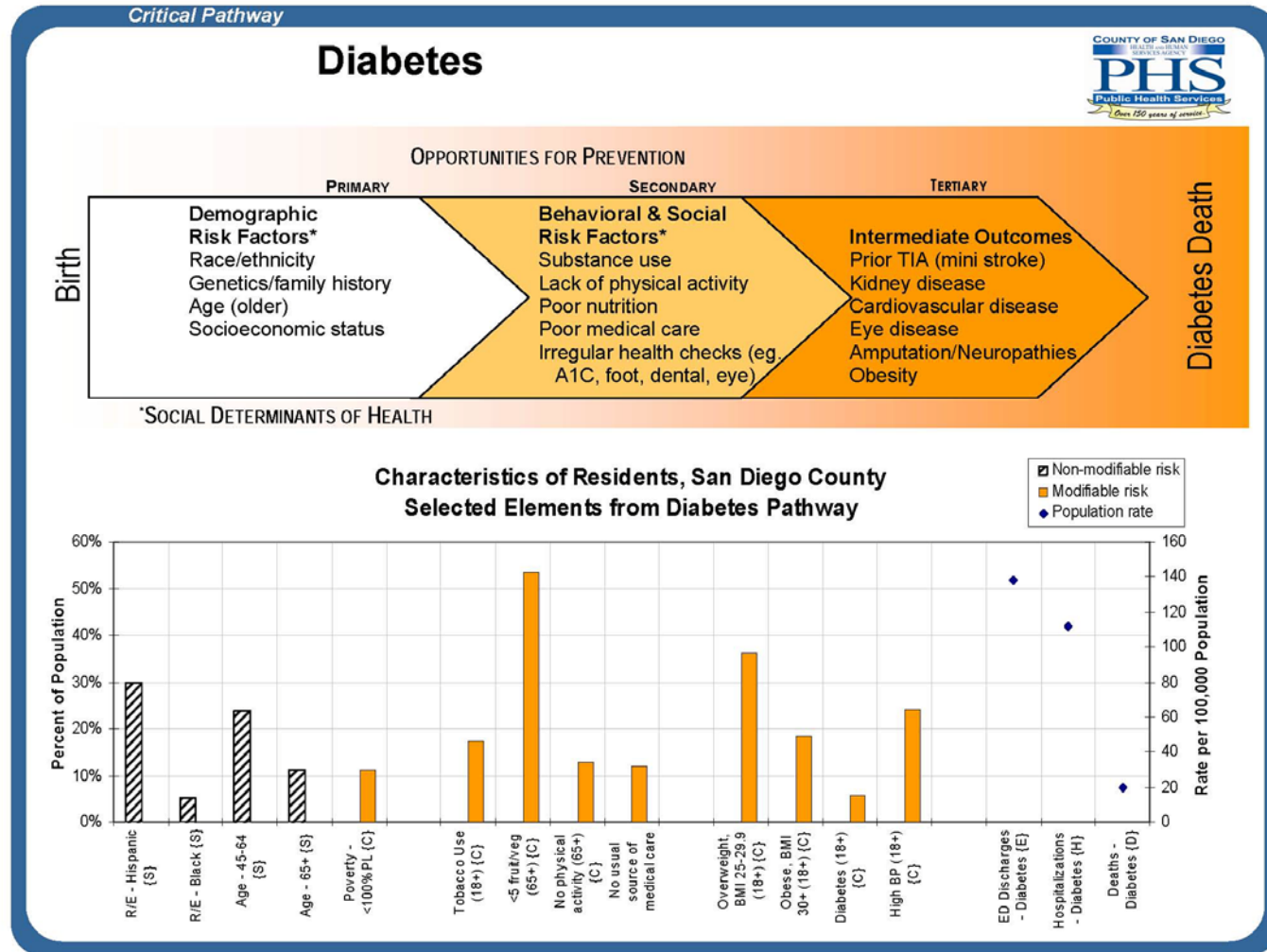
Contact Us

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